



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/412,447	10/04/1999	BRADLEY CAIN	2204/144	9658

2101 7590 12/24/2002

BROMBERG & SUNSTEIN LLP  
125 SUMMER STREET  
BOSTON, MA 02110-1618

EXAMINER

MIRZA, ADNAN M

ART UNIT	PAPER NUMBER
----------	--------------

2141

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/412,447

Applicant(s)

CAIN ET AL.

Examiner

Adnan M Mirza

Art Unit

2141

V

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin (U.S. 5,881,241) and in view of Bellenger (U.S. 5,802,054).

As per claim 1, 12, 39, 46, 53 Corbin disclosed a method of maintaining a route table in a routing device, the route table including a plurality of routes between network devices in a network, the method comprising: registering a given set of routes (col. 2, lines 53-57);

However Corbin failed to disclose determining if any of the routes in the given set of routes has changed; and listing data identifying each route in the given set of routes that has been determined to be changed. In the same field of endeavor Bellenger disclosed determining if any of the routes in the given set of routes has changed; and listing data identifying each route in the given set of routes that has been determined to be changed (col. 7, lines 5-29).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated if any of the routes in the given set of routes has changed, and listing data identifying each route in the given set of routes that has been determined to be changed as taught by Bellenger in the method of Corbin to make it more fault tolerant and easy to trouble shoot.

Art Unit: 2141

3. As per claim 2,13,24,36,43,50 Corbin disclosed wherein the given set of routes is associated with a given routing protocol (col. 3, lines 5-9).
4. As per claim 3,25,35,42,49 Bellenger disclosed further comprising: if determined to have changed, then generating a first data value indicating that at least one of the routes in the given set of routes has changed (col. 10, lines 47-65).
5. As per claim 4,15,26,40,47,54 Bellenger disclosed wherein each route in the set of routes includes an associated sequence number, the first data value being a checksum that is a function of at least one of the sequence numbers (col. 7, lines 1-11).
6. As per claim 5,16,27 Corbin disclosed wherein a given route in the table includes a list data value indicating whether the given route has been listed, the given route being in the given set of routes (col. 4, lines 35-40).
7. As per claim 6,17,28 Corbin disclosed wherein the list data value is a single bit associated with the given set of routes (col. 4, lines 1-5).
8. As per claim 7,18,29 Corbin disclosed wherein the act of listing comprises: determining if the list data value has been set; and listing the given route if it has been determined that the list data value has not been set, the given route not being listed if it has been determined that the list data value has been set (col. 6, lines 43-53).
9. As per claim 8,19,30 Corbin disclosed wherein the act of listing further comprises: setting the list data value (col. 4, lines 35-40).
10. As per claim 9,20,31,38,45,52 Bellenger disclosed wherein the listed data includes a pointer to a route in the route table (col. 9, lines 14-21).

Art Unit: 2141

11. As per claim 10,21,32 Corbin disclosed accessing the list to determine each route that has changed (col. 5, lines 36-44).

12. As per claim 11,22,33,37,44,51 Corbin disclosed wherein the list is accessed once during each of a selected polling interval (col. 6, lines 45-53).

13. As per claim 14 Bellenger disclosed a first data value generator operatively coupled with the route examiner, the first data value generator generating, if at least one of the routes is determined to have changed, a first data value indicating that the at least one of the routes in the given set of routes has changed (col. 11, lines 6-20).

14. As per claim 23 Bellenger disclosed a computer program product for use on a computer system for maintaining a route table in a routing device, the route table including a plurality of routes between network devices in a network (col. 7, lines 12-23), the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code including: program code for registering a given set of routes; program code for determining if any of the routes in the given set of routes has changed (col. 11, lines 7-20); and program code for listing data identifying each route in the given set of routes that has been determined to have changed (col. 10, lines 50-65).

15. As per claim 34 Bellenger disclosed a method of determining if a given route in a route table has changed, the route being in a given set of routes, the method comprising: accessing a list of routes associated with the given set of routes; and determining if data identifying the given route is listed in the list of routes (col. 7, lines 3-10), the given route being deemed to have changed if determined to be listed in the list of routes (col. 7, lines 11-24).

Art Unit: 2141

16. As per claim 41,48 Corbin disclosed an apparatus for determining if a given route in a route table has changed, the route being in a given set of routes, the apparatus comprising: a list accessing module that accesses a list of routes associated with the given set of routes (col. 6, lines 45-53); and a route examiner operatively coupled with the list accessing module (col. 8, lines 12-28), the route examiner determining if data identifying the given route is listed in the list of routes, the given route, being deemed to have changed if determined to be listed in the list of routes (col. 9, lines 26-41).

Applicant's arguments are as follows:

17. Applicant argued that prior art did not disclose, "determining if any of the routes in the given set of routes that has been determined to be changed".

As to applicant's argument Bellenger disclosed the node route logic determine whether the received frame includes a switch route field that indicates a port in the set of ports to which the frame should be directed for transmission. If the received frame includes a switch route field, that field is updated according to source route type protocol, and the frame is forwarded with the updated switch route field out the indicated port. If the received frame does not include a switch route field, such would normally be the case for a frame entering the network switch at a switch node on the boarder of the network switch, then the identifying tag generated by the flow detect logic is used to access the route table memory (col. 3, lines 24-36).

Applicant's arguments were not persuasive therefore action is made final.

***Conclusion***

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (703)-305-4633.

18. The examiner can normally be reached on Monday to Friday during normal business hours.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703)-305-4815. The fax for this group is (703)-746-7239.

Art Unit: 2141

21. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)-746-7239 (For Status Inquiries, Informal or Draft Communications, please label "PROPOSED" or "DRAFT");

(703)-746-7239 (For Official Communications Intended for entry, please mark "EXPEDITED PROCEDURE"), 703)-746-7238 (For After Final Communications).

22. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Any response to a final action should be mailed to:

BOX AF

Commissioner of Patents and Trademarks Washington, D.C.20231

Or faxed to:

Hand-delivered responses should be brought to 4<sup>th</sup> Floor Receptionist, Crystal Park II,  
2021 Crystal Drive, Arlington, VA 22202.

AM

Adnan Mirza

Examiner

A handwritten signature in black ink, appearing to read 'Le Hien Luu', with a long horizontal line extending from the end of the signature.

LE HIEN LUU  
PRIMARY EXAMINER